

REMARKS

The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1-43 are pending in this case. Claims 3, 6, 9-10, 13-26, 29, 32, 39 have been rejected under 35 U.S.C. § 112, second paragraph. Claims 1-43 have been rejected under 35 U.S.C. § 103(a). Independent claims 1, 14, 27, 40 and dependent claims 3, 6, 9-10, 13, 16, 19, 26, 29, 32, 39 have been amended.

With respect to the Examiner's 35 U.S.C. § 103(a) rejections, Applicant has reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant's claimed invention. Therefore, Applicant respectfully traverses and requests favorable reconsideration.

Personal Interview

Applicant wishes to thank the Examiner for granting a personal interview on May 25, 2005. The interview participants included Examiner Hanh Phan and Howard Zaretsky (Applicant's representative).

Response to 35 U.S.C. § 112, Second Paragraph Rejections

The Examiner rejected claims 3, 6, 9-10, 13-26, 29, 32, 39 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Amended claims 3, 6, 9-10, 13-26, 29, 32, 39 now feature language which make it clear what the subject matter is that the Applicant regards as the invention. Applicant believes that amended claims 3, 6, 9-10, 13-26, 29, 32, 39 overcome the Examiner's rejection based on § 112, second paragraph grounds. The Examiner is respectfully requested to withdraw the § 112, second paragraph rejection.

Response to 35 U.S.C. § 103(a) Rejections

The Examiner rejected claims 1-43 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2002/0089712A1 ("Kang et al.") in view of U.S. Patent No. 6,324,162 ("Chaudhuri"). Applicant respectfully submits that the prior art fails to disclose or suggest at least a method of determining a protection route comprising the steps of removing (1) all logical links from consideration that have a color other than that of the link to be protected and (2) the link to be

protected and generating a restoration path only from the remaining single color logical topology. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

While continuing to traverse the Examiner's rejections, Applicant, in order to expedite the prosecution, has chosen to clarify and emphasize the crucial distinctions between the present invention and the devices of the patents cited by the Examiner. Specifically, representative claim 1 has been amended to include a method of determining a protection route in a network for links having a wave division multiplexing (WDM) color associated therewith, the method comprising the steps of removing from consideration all logical links having a color other than that of the link to be protected to generate a single color logical topology, removing from consideration the link to be protected from the single color logical topology and generating a restoration path for the link to be protected from the single color logical topology only.

Kang et al. teaches a protection and restoration method for MPXS in optical mesh networks, particularly to protection and restoration method which can find and restore fast failures by configuring routing table with working label and protection label when failures occur at links or nodes. By configuring a routing table consisting of a working label and a protection label and by setting an optical path as working path and protection path, data is transferred through the working path, and when a failure occurs in an optical path, data is transferred through a protection path by using a preliminarily configured protection label and by switching to. By configuring the routing table with working and protection labels, failures can be quickly restored when failures occur at links or nodes, and whole network resources can be applicable.

Chaudhuri teaches restoration of service in a mesh network upon the failure of a working channel on a link connecting a pair of nodes is accomplished by first attempting to route traffic on a restoration channel in the same link when such a channel is available. If such "localized" restoration cannot be accomplished, then the end-point (traffic originating and/or terminating) nodes that are connected by a path that includes the link having the failed working channel then implements a pre-computed path. Each pre-computed path identifies a collection of channels in a series of links that connect the end-point nodes (and any intermediate nodes) so as to bypass traffic around the link having the failed working channel. The pre-computed path information is typically pre-stored in the end-point nodes to enable the end-point nodes to effect rapid restoration in the event localized restoration is not achievable.

It is submitted that the protection scheme of the present invention is operative to guarantee that the protection route calculation process will not generate a route over a failed link when calculating a protection route for the failed link. In other words, the link a failure occurs on cannot

be used to protect itself. Considering an entire set of links that may fail together, such as multiple wavelengths within an optical fiber, the method of the present invention insures that the protection routes for a particular link do not pass through that same link. The method of the present invention guarantees that the same resource is not used to protect two or more logical links that fail together.

The method achieves this by analyzing the color of the logical links making up a network. First, a single color logical topology is generated by removing from consideration (1) all logical links having a color other than that of the link to be protected and (2) the link to be protected. Then, a restoration path for the link to be protected is generated using only the single color logical topology. This guarantees that the protection routes for a link will not pass through that link in the event of a failure. This feature is neither taught nor suggested by the Kang et al. and Chaudhuri references.

Applicant respectfully submits that the combination suggested by the Examiner fails to teach or suggest all the claims limitations. The Examiner has failed to show that one of ordinary skill in the art would have been motivated to modify Kang et al. in view of Chaudhuri to arrive at the claimed invention because neither Kang et al. nor Chaudhuri teaches or suggests the present invention. Specifically, Kang et al. and Chaudhuri fail to teach or suggest generating a single color logical topology by removing from consideration (1) all logical links having a color other than that of the link to be protected and (2) the link to be protected and then generating a restoration path for the link to be protected using only the single color logical topology.

It is believed that independent claims 1, 14, 27 and 40 overcome the Examiner's § 103(a) rejection based on the Kang et al. and Chaudhuri references. In addition, it is believed that dependent claims 2-13, 15-26, 28-39, 41-43 also overcome the Examiner's rejection based on § 103(a) grounds. The Examiner is respectfully requested to withdraw the rejection based on § 103(a).

Correction of Typographical Errors

Amendments have been made to correct grammatical and usage errors in the specification. No new matter has been added to the application by these amendments.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that independent claims 1, 14, 27 and 40 and hence dependent claims 2-13, 15-26, 28-39, 41-43 are now in condition for allowance. Prompt notice of allowance is respectfully solicited.

In light of the Amendments and the arguments set forth above, Applicant earnestly believes that they are entitled to a letters patent, and respectively solicit the Examiner to expedite prosecution

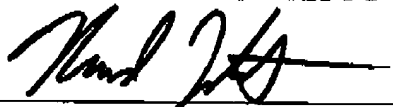
of this patent applications to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

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Respectfully submitted,

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